

Car-Coupling.

Patented Sept. 9, 1879.



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LEWIS P. BAYLIFF AND WILLIAM HARROD, OF UNION TOWNSHIP, AUGLAIZE COUNTY, ASSIGNORS OF ONE-HALF OF THEIR RIGHT TO AUGUST SMITH AND ALLEN BESSE, OF UNIOPOLIS, OHIO.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **219,435**, dated September 9, 1879; application filed May 3, 1879.

To all whom it may concern:

Be it known that we, LEWIS P. BAYLIFF and WILLIAM HARROD, of Union township, in the county of Auglaize and State of Ohio, have invented a new and valuable Improvement in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of our car-coupling in plan view, and Fig. 2 is a vertical longitudinal section of the same.

This invention relates to improvements in car-couplings; and the nature of invention consists in the construction and novel arrangement, in combination, of the double-ended coupling-hook having a bowed under spring centrally arranged, a link-hook having an under spring, upper bearing-springs extending downward from the draw-heads to the link and hook, lower bearings on the draw-heads for the under springs of the link and hook, and a transverse rock-shaft passing through the draw-head having holding and relieving tongues or catches, all as hereinafter shown and described.

In the accompanying drawings, the letters A A designate the draw-heads, having their mouths flaring, and provided with springs D', which extend downward and rearward from the upper and front portions of said mouths, said springs being curved upward at their lower ends, and adapted to bear on the rear ends of the coupling hook and link respectively.

The lower portions or sloping floors of the mouths of the draw-heads are each provided with a bearing-plate, *d*, which extends in the direction of the rock-shaft *c*, which passes transversely through each draw-head, and is provided with a catch arm or tongue, C, the heel of which is short and rounded, and the toe of which is longer and notched to engage the inner end of the bearing-plate *d*, as shown in the drawings.

B indicates a hook-link or coupling-bar, having at one end a hook, *b*, and at the other a

link or loop, whereby it engages with the coupling-hook B'.

To the middle portion of the hook-link is secured an under spring, D, which extends downward and rearward, and bears by its end against the bearing *d* of the draw-bar, the length of the spring being such that when the rear hook of the link-bar is engaged with the heel *b* of the shaft-catch C the link-bar will be held in a horizontal, or nearly horizontal, position. In this position the upper spring, D', of the draw-head bears on the link-bar near its hook end and keeps the latter to its engagement with the heel of the shaft-catch.

The double under hook-bar B' is also provided with an under spring, D, which is bowed in form and centrally attached, so that the bar is reversible. This bar is also engaged with the heel end of the catch-arm of the rock-shaft of its draw-bar, and is kept in engagement by means of the upper bearing-spring, D', of its draw-bar.

The hooks of the coupling-bars which engage with the catches of the rock-shafts are of sufficient depth to span the line of the rock-shaft, so that they bear in rear of and against said shafts, and have no tendency to pull the heels of the catches forward. Their engagement is therefore nearer the springs D', preventing casual disengagement of their hook ends.

In order to disengage the hook or link bar, the rock-shaft is turned by means of a suitable hand-wheel or other device at the side of the car, and the catch-arm of the shaft turned so as to throw its rounded heel forward, lifting the upper or bearing springs and releasing the hook from said heel. As the spring D' affords a stop for the long toe of the catch, it is evident that it cannot become reversed in the draw-head, and that in order to connect the hook or link bar it is only necessary to press the link end back between said spring D' and the catch-arm until it becomes automatically engaged with the heel of the latter.

Further devices may be provided for manipulating the rock-shaft and its catch-tongues. The lateral extension of the shaft reaching out to the side of the car is supported in a pendant, *c*², fastened to the car. The shaft is also here

provided with a disk or wheel, c^3 , having a handle, c^4 , and opposite marginal notches c^5 . A spring-tooth having its spring fastened to the pendant c^2 , or other convenient point, is adapted to engage either of the notches c^5 of the shaft-disk c^3 , whereby the shaft with its catch-arms may be set so as to prevent coupling, or may be held ready for coupling, and when coupled lock the shaft in position.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The car-coupling consisting of the combination, with the draw-heads having the upper bearing-springs, D' , and the lower bearing-

plates, d , of the hook-link B, having the under spring D, the double-ended hook-bar B', having a bowed under spring, and the rock-shaft c , having the catch-arms C, formed with short rounded heels to engage the hooks of the coupling-bar and longer toes to engage the plates d , substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

LEWIS P. BAYLIFF.
WILLIAM HARROD.

Witnesses:

F. C. LAYTON,
J. A. NICHOLS.